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TITLE: Plastic intake manifold for variable intake

system

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## **BASIC-ABSTRACT:**

NOVELTY - A plastic intake manifold for a variable intake system is provided to divide the whole structure of the intake manifold to mold the whole intake manifold with plastics, thereby reducing the whole weight of the **engine** and

providing simplified assembling structure.

## DETAILED DESCRIPTION - A <u>plastic intake manifold for a</u> <u>variable intake system</u>

<u>Includes an upper housing(20) formed of plastics with division surface(22)</u>

horizontally cut in the vicinity of a center of a communication channel (48)

communicated with a throttle body to form an upper half of a plenum chamber, a

top part of the division surface being formed as outer walls(24) of circulation

channels per cylinder, a center housing(40) formed of plastics with an upper

division surface(42) corresponding to the division surface of the upper housing

to form a lower half of the plenum chamber and having lower division

surfaces(43) for dividing runners per cylinder by half, and a direct

channel(46) per cylinder for communicating the plenum chamber to beginning

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parts of the runners, a lower housing(60) formed of plastics with division

surfaces(62) corresponding to the lower division surfaces of the center housing

to form lower parts of the runners, a plenum insert(80) formed of plastics, and

having inner walls(82) as bottom surfaces of the circulation channels,

partition walls(84) as side surfaces of the circulation channels to be disposed

in the upper and lower housings for forming a substantial plenum chamber

communicating the communication channel to an inner space of the partition

walls, a lower part of the plenum chamber being communicated with the direct

channels of the center housing, and a valve element(100) rotatably mounted with

valve plates(106) corresponding to the direct channels by a rotation shaft(104)

and disposed between a lower opened part of the plenum chamber and the top

surfaces of the direct channels of the center housing for opening and closing the direct chambers.

**CHOSEN-DRAWING: Dwg.1/10** 

TITLE-TERMS: PLASTIC INTAKE MANIFOLD VARIABLE INTAKE SYSTEM

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